Fluoryx Labs

Safety Data Sheet

FC04-06

2-(Perfluorohexyl)ethyl Alcohol

Revised 19-November-2016

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name	2-(Perfluorohexyl)ethyl alcohol
Catalog Number	FC04-06
Brand	Fluoryx Labs
CAS Number	647-42-7

Relevant identified uses of the Substance or mixture and uses advised against

Identified uses: Laboratory chemicals. Manufacture of substances.

Details of the supplier of the safety data sheet

Company

Fluoryx Labs
3650 Research Way, #22
Carson City, NV 89706
USA
+1 (510) 329-9149 (Telephone)
+1 (510) 686-8799 (Fax)
www.fluoryx.com

Emergency call: +01-813-248-0585 (International)
+1-800-255-3924 (USA)

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 4), H227
Skin irritation (Category 2), H315
Eye irritation (Category 2A), H319
Specific target organ toxicity - single exposure (Category 3), respiratory system, H335

GHS Label elements, including precautionary statements

Pictogram

Signal word Warning

Hazard statement(s)

H227	Combustible liquid
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Precautionary statement(s)

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor/ physician if you feel unwell.
P321	Specific treatment (see supplemental first aid instructions on this label).
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P362	Take off contaminated clothing and wash before reuse.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

3. COMPOSITION AND INFORMATION ON COMPONENTS

Synonyms 3,3,4,4,5,5,6,6,7,7,8,8,8-Tridecafluoro-1-octanol
1H,1H,2H,2H-Tridecafluorootan-1-ol

Formula $C_8H_5F_{13}O$
$CF_3CF_2CF_2CF_2CF_2CF_2CH_2CH_2OH$

Molecular weight 364.10

CAS number 647-42-7

EC number 211-477-1

Hazardous components

Material	Classification	Concentration
2-(Perfluorohexyl)ethyl alcohol	Flam. Liq. 4; Skin Irrit. 2; Eye Irrit. 2A; STOT SE 3; H227, H315, H319, H335	≤100%

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

General advice Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact	Wash off with soap and plenty of water. Consult a physician.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed - The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of any immediate medical attention and special treatment needed - no data available

5. FIRE FIGHTING MEASURES

Suitable extinguishing media	For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.
Special hazards arising from the substance	Hazardous decomposition products formed under fire conditions - carbon oxides and hydrogen fluoride,.
Advice for firefighters	Wear self-contained breathing apparatus for fire fighting.
Further Information:	Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Methods and materials for containment and cleaning up	Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition - no smoking. Take measures to prevent the build up of electrostatic charge.
Conditions for safe storage	Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters	Contains no substances with occupational exposure

	limit values.
Appropriate engineering controls	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal protective equipment	
Eye/face protection	Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Body Protection	Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi- purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Form	Liquid, clear
Color	Colorless
Safety Data	
pH	3 - 7
Melting Point/Freezing Point	-35 °C
Boiling Point	70 °C @ 20 mm Hg
Flash Point	91 °C (closed cup)
Ignition Temperature	No data available
Auto-ignition Temperature	No data available
Lower Explosion Limit	No data available
Upper Explosion Limit	No data available
Thermal Decomposition Temperature	No data available
Vapor Pressure	No data available
Vapor Density	>1 (air = 1)
Density	1.65 @ 25 °C
Water Solubility	0.70 to 0.72 mg/L @ 25 °C

Partition Coefficient (*n*-octanol/water)	Log Pow: 1.943
Relative Vapor Density (Air = 1)	> 1
Odor	No data available
Odor Threshold	No data available
Evaporation Rate	No data available
Oxidizing Properties	No data available
Viscosity	18 to 22 mPa·s @ 20 °C

10. STABILITY AND REACTIVITY

Reactivity — No data available

Chemical stability — Stable under recommended storage conditions.

Possibility of hazardous reactions — Polymerization will not occur. No other data available.

Conditions to avoid — Heat, flames, sparks.

Incompatible materials — Strong oxidizing agents.

Hazardous decomposition products — Hazardous decomposition products formed under fire conditions - carbon oxides, hydrogen fluoride.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50	No data available
Inhalation LC50	No data available
Dermal LD50	No data available
Other information on acute toxicity	No data available

Skin corrosion/irritation — No data available

Serious eye damage/eye irritation — No data available

Respiratory or skin sensitization — No data available

Germ cell mutagenicity — No data available

Carcinogenicity

IARC — No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH — No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP — No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA — No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity — No data available

Teratogenicity — No data available

Animal Data: — The product has been reported as a slight skin irritant in animals. In a Bacterial Reverse Mutation Test with an Independent Repeat Assay as reported

by DuPont, the product did not cause a positive response in the presence and absence of Aroclor-induced rat liver S9. The product was negative in salmonella gene mutation and mammalian gene mutation assays. Product is not biodegradable.

Specific target organ toxicity - single exposure (Globally Harmonized System)
Inhalation – may cause respiratory irritation

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
No data available

Aspiration hazard	No data available
Signs and Symptoms of Exposure:	No data available
Synergistic effects	No data available
Additional Information	RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

Toxicity	No data available
Persistence and Degradability	Does not readily degrade.
Bioaccumulative Potential	No data available
Mobility in Soil	No data available
PBT and vPvB Assessment	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
Other adverse effects	No data available

13. DISPOSAL CONSIDERATIONS

Product	This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer non-recyclable solutions to a licensed disposal company. Contact Fluoryx to return unused product.
Contaminated Packaging	Dispose of as unused product.

14. TRANSPORTATION INFORMATION

DOT (US)	NA-Number: 1993 Class: NONE Packing group: III Proper shipping name: Combustible liquid, n.o.s. (3,3,4,4,5,5,6,6,7,7,8,8,8-Tridecafluorooctan-1-ol) Marine Pollutant: No Poison Inhalation Hazard: No
IMDG	Not dangerous goods
IATA	Not dangerous goods

15. REGULATORY INFORMATION

TSCA Status	Listed
SARA 302 Components	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards	Fire hazard, acute health hazard
Massachusetts Right To Know Components	No components are subject to the Massachusetts Right to Know Act.
Pennsylvania Right To Know Components	3,3,4,4,5,5,6,6,7,7,8,8,8-Tridecafluorooctan-1-ol CAS-No. 647-42-7 Revision Date 2009-07-17
New Jersey Right To Know Components	3,3,4,4,5,5,6,6,7,7,8,8,8-Tridecafluorooctan-1-ol CAS-No. 647-42-7 Revision Date 2009-07-17
California Prop. 65 Components	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Eye Irrit.	Eye irritant
Flam. Liq.	Flammable liquid
STOT SE 3	Specific target organ toxicity - single exposure (Category 3)
H227	Combustible liquid
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
Skin Irrit.	Skin irritation

HMIS Classification

Health hazard	2
Flammability	2
Physical hazards	0

NFPA Rating

Health hazard	2
Fire	2
Reactivity Hazard	0

Further Information

For R&D use only. Not for drug, household, or other uses. The previous information is based upon our current knowledge and experience of our product and is not exhaustive. It applies to the product as defined by the specifications. In case of combinations or mixtures, one must confirm that no new hazards are likely to exist. In any case, the user is not exempt from observing all legal, administrative and regulatory procedures relating to the product, personal hygiene, and integrity of the work environment. Unless noted to the contrary, the technical information applies only to pure product.

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any liability in connection with this information or its use. This information is for use by technically skilled persons at their own discretion and risk and does not relate to the use of this product in combination with any other substance or any other process. This is not a license under any patent or other proprietary right. The user alone must finally determine suitability of any information or material for any contemplated use, the manner of use and whether any patents are infringed. This information gives typical properties only and is not to be used for specification purposes.

End of SDS